Amendments to Claims

Claims 25, 26, 27, 36, 38, 41, 42, 43, 44, 45, 46, 53, 55, 57, 58, 59, 62, 69, 77, 78 and 79 are currently being amended. New claims 93-102 are currently being added. The status of all the claims are shown below, including those that are not being currently amended.

1.-24. (Cancelled).

25. (Currently Amended) An electro-kinetic air transporter-conditioner system comprising:

an upstanding, elongated housing with an air inlet vent in a first side of said housing and an air outlet vent in a second side of said housing opposite said first side;

an ion generating unit positioned in said housing, said ion generating unit having a plurality of pin-ring electrode configurations located one above the other; and

each of said pin-ring electrode configurations including a ~~first~~ pin electrode that is directed toward an opening in a ~~second~~ ring electrode, said pin electrodes being located closer to said inlet vent than said outlet vent, said ring electrodes being located closer to said outlet vent than said inlet vent; and

wherein said plurality of pin-ring electrode configurations produce an electro kinetic airflow from the air inlet vent to the air outlet vent.

26. (Currently Amended) The system of claim 25 wherein each said pin electrode in said pin-ring electrode configuration ~~includes said first pin electrode that~~ is pointed.

27. (Currently Amended) The system of claim 25 wherein each said pin electrode in said pin-ring electrode configuration ~~includes said first pin electrode that~~ is triangle-shaped.

28. (Original) The system of claim 25 including a user control that can do at least one of (1) cause the system to be energized, (2) control a duty cycle of the ion generating unit, (3) control a pulse mode operation.

29. (Original) The system of claim 25 including user controls that can (1) cause the system to be energized, (2) control a duty cycle of the ion generating unit, (3) control a pulse mode operation.

30. (Original) The system of claim 28 wherein the pulse mode control can initiate a burst of output ozone.

31. (Original) The system of claim 29 wherein the pulse mode control can initiate a burst of output ozone.

32. (Original) The system of claim 25 wherein said housing has elongated recesses.

33. (Original) The system of claim 25 wherein said ion generating unit includes a high voltage pulse generator.

34. (Original) The system of claim 25 wherein said air inlet vent is covered with horizontal louvers and said air outlet vent is covered with horizontal louvers.

35. (Previously Amended) The system of claim 25 including a user control located on a top of said housing.

36. (Currently Amended) The system of claim 25 wherein said ~~first~~ pin electrodes are located adjacent ~~the~~ said air inlet vent and ~~the second~~ said ring electrodes are located adjacent the air outlet vent.

37. (Previously Amended) The system of claim 25 wherein said inlet vent and said outlet vent are elongated along a length of said elongated housing.

38. (Currently Amended) The system of claim 25 wherein each of said ~~first~~ pin electrodes includes a plurality of conductive fibers.

39. (Original) The system of claim 25 wherein said housing has a cross-section in the shape of a figure eight.

40. (Previously Amended) The system of claim 25 wherein said air inlet vent and said air outlet vent have louvers that are directed generally perpendicular to a vertical direction of elongation of said housing.

41. (Currently Amended) The system of claim 25 wherein each said ~~second~~ ring electrode has a flat surface generally facing said ~~first~~ pin electrode, and transitioning smoothly and continuously from said flat surface, a second surface surrounding a periphery of said opening to form a skirt region surrounding said opening.

42. (Currently Amended) The system of claim 25 wherein each said ~~first~~ pin electrode points in a downstream direction.

43. (Currently Amended) The system of claim 25 wherein when energized said ion generating unit causes air to flow in a downstream direction from said ~~first~~ pin ~~electrode~~ electrodes toward said ~~second~~ ring ~~electrode~~ electrodes.

44. (Currently Amended) An electro-kinetic air transporter-conditioner system comprising:

an upstanding, elongated housing with an air inlet ~~vent~~ located in a first side of said housing and an air outlet ~~vent~~ located in a second side of said housing generally opposite said first side;

said inlet ~~vent~~ and said outlet ~~vent~~ being elongated along a length of said elongated housing;

an ion generating unit positioned in said housing, said ion generating unit having a pin-ring electrode configuration; ~~and~~

~~the~~ said pin-ring electrode configuration including a ~~first~~ pin electrode that is directed in a downstream direction toward an opening in a ~~second~~ ring electrode, said pin electrode being located closer to said inlet than said outlet, said ring electrode being located between said outlet and said inlet; and

wherein said pin-ring electrode configuration produces an electro kinetic airflow from the air inlet to the air outlet.

45. (Currently Amended) The system of claim 44 wherein said ~~first~~ pin electrode ~~that~~ is pointed.

46. (Currently Amended) The system of claim 44 wherein said ~~first~~ pin electrode ~~that~~ is triangle-shaped.

47. (Original) The system of claim 44 including a user control that can do at least one of (1) cause the system to be energized, (2) control a duty cycle of the ion generating unit, (3) control a pulse mode operation.

48. (Original) The system of claim 44 including user controls that can (1) cause the system to be energized, (2) control a duty cycle of the ion generating unit, (3) control a pulse mode operation.

49. (Original) The system of claim 47 wherein the pulse mode control can initiate a burst of output ozone.

50. (Original) The system of claim 48 wherein the pulse mode control can initiate a burst of output ozone.

51. (Original) The system of claim 44 wherein said housing has elongated recesses.

52. (Original) The system of claim 44 wherein said ion generating unit includes a high voltage pulse generator.

53. (Currently Amended) The system of claim 44 wherein said air inlet ~~vent~~ is covered with horizontal louvers and said air outlet ~~vent~~ is covered with horizontal louvers.

54. (Previously Amended) The system of claim 44 including a user control located on a top of said housing.

55. (Currently Amended) The system of claim 44 wherein said ~~first~~ pin electrode is located adjacent ~~the~~ said air inlet ~~vent~~ and the ~~second~~ ring electrode is located adjacent ~~the~~ said air outlet ~~vent~~.

56. (Original) The system of claim 44 wherein said housing has a cross-section in the shape of a figure eight.

57. (Currently Amended) The system of claim 44 wherein said air inlet ~~vent~~ and said air outlet vent have louvers that are directed generally perpendicular to a vertical direction of elongation of said housing.

58. (Currently Amended) The system of claim 44 wherein ~~each~~ said ~~second~~ ring electrode has a flat surface generally facing said ~~first~~ pin electrode, and transitioning smoothly and continuously from said flat surface, a second surface surrounding a periphery of said opening to form a skirt region surrounding said opening.

59. (Currently Amended) The system of claim 44 wherein when energized said ion generating unit causes air to flow in the downstream direction from said ~~first~~ pin electrode toward said ~~second~~ ring electrode.

60. (Original) The system of claim 44 wherein said ~~first~~ pin electrode includes a plurality of conductive fibers.

61. (Cancelled).

62. (Currently Amended) An ion and ozone producing system comprising:

an elongated housing with ~~a~~ an inlet vent along an elongated exterior of said elongated housing to allow ambient air to enter said housing, and an outlet vent along the elongated exterior of said elongated housing to allow air within said housing to exit said housing to ambient;

an ion and ozone generating unit within said housing, said ion and ozone generating unit including:

a high voltage generator;

a plurality of tapered electrodes located one above the other; and

a plurality of openings each surrounded by electrically conductive material, said plurality of openings located one above the other;

wherein each said tapered electrode is directed toward a corresponding one of said openings; and

wherein said high voltage generator provides a voltage difference between said plurality of tapered electrodes and said electrically conductive material surrounding said openings.

63. (Previously Added) The system of claim 62, wherein each said tapered electrode includes a base and an apex, said based being wider than said apex, said apex being pointed generally toward a corresponding one of said openings.

64. (Previously Added) The system of claim 63, wherein each said base tapers to a corresponding said apex at a substantially constant angle.

65. (Previously Added) The system of claim 62, wherein each said tapered electrode is generally horizontally aligned with a corresponding one of said openings.

66. (Previously Added) The system of claim 62, wherein each said tapered electrode is generally triangle-shaped.

67. (Previously Added) The system of claim 62, including a user control that allows adjustment of ozone production.

68. (Previously Added) The system of claim 62, including a user control that allows adjustment of ion production.

69. (Currently Amended) An ion and ozone producing system comprising:

an elongated housing with an inlet vent along an elongated exterior of said elongated housing to allow ambient air to enter said housing, and an outlet vent along the elongated exterior of said elongated housing to allow air within said housing to exit said housing to ambient; and

an ion and ozone generator within said housing, said ion and ozone generator including:

a high voltage generator; and

an electrode assembly electrically connected to said high voltage generator, said electrode assembly including a first electrode array and a second electrode array, said first electrode array comprising

a plurality of tapered electrodes located one above the other, said second electrode array comprising conductive material surrounding each of a plurality of openings located one above the other;

wherein said high voltage generator provides a voltage difference between said first electrode array and said second electrode array, thereby producing ions and ozone that flow out of said outlet vent.

70. (Previously Added) The system of claim 69, wherein each said tapered electrode includes a base and a tapered distal end, said base electrically connected to said high voltage generator and said tapered distal end aimed generally toward said second electrode array.

71. (Previously Added) The system of claim 70, wherein said tapered distal end of each said tapered electrode is aimed generally toward a corresponding one of said openings of said second electrode array.

72. (Previously Added) The system of claim 69, wherein each tapered electrode is generally horizontally aligned with a corresponding one of said openings of said second electrode array.

73. (Previously Added) The system of claim 69, wherein at least one of said first electrode array and said second electrode array can be lifted from said housing to allow cleaning of said at least one of said first electrode array and said second electrode array.

74. (Previously Added) The system of claim 69, wherein each tapered electrode is triangle-shaped.

75. (Previously Added) The system of claim 69, including a user control that allows adjustment of ozone production.

76. (Previously Added) The system of claim 69, including a user control that allows adjustment of ion production.

77. (Currently Amended) A system for conditioning air that produces at least one of ozone and ions, the system comprising:

an elongated housing with an inlet vent along an elongated exterior of said elongated housing to allow ambient air to enter said housing, and an outlet vent along the elongated exterior of said elongated housing to allow air within said housing to exit said housing to ambient;

a high voltage generator within said housing;

a plurality of tapered electrodes located one above the other within said housing; and

a plurality of openings surrounded by electrically conductive material within said housing, said plurality of openings located one above the other;

wherein each said tapered electrode is generally horizontally aligned with a corresponding one of said openings; and

wherein said high voltage generator provides a voltage difference between said plurality of tapered electrodes and said electrically conductive material surrounding said openings.

78. (Currently Amended) A system for conditioning air that produces at least one of ozone and ions, the system comprising:

an elongated housing with an inlet vent along an elongated exterior of said elongated housing to allow ambient air to enter said housing, and an outlet vent along the elongated exterior of said elongated housing to allow air within said housing to exit said housing to ambient;

a high voltage generator within said housing;

an electrode assembly within said housing, said electrode assembly electrically connected to said high voltage generator, said electrode assembly including a first electrode array and a second electrode array, said first electrode array comprising a plurality of tapered electrodes located one above the other, said second electrode array comprising conductive material surrounding a plurality of openings located one above the other; and

wherein said high voltage generator provides a voltage difference between said first electrode array and said second electrode array.

79. (Currently Amended) A system for conditioning air that produces at least one of ozone and ions, the system comprising:

an elongated housing with an inlet vent along an elongated exterior of said elongated housing to allow ambient air to enter said housing, and an outlet vent along the elongated exterior of said elongated housing to allow air within said housing to exit said housing to ambient;

a high voltage generator within said housing;

an electrode assembly within said housing, said electrode assembly electrically connected to said high voltage generator, said electrode assembly including a first electrode array and a second electrode array, said first electrode array comprising a plurality points located one above the other, said second electrode array comprising conductive material surrounding a plurality of openings located one above the other; and

wherein said high voltage generator provides a voltage difference between said first electrode array and said second electrode array.

80. (Previously Added) The system of claim 79, wherein each said point is directed generally toward a corresponding one of said openings.

81. (Previously Added) The system of claim 79, wherein each said point is generally horizontally aligned with a corresponding one of said openings.

82. (Previously Added) The system of claim 25, wherein said upstanding elongated housing has a housing height that is at least twice a maximum housing width, and wherein said plurality of pin-ring electrode configurations located one above the other form a single column within said housing, thereby enabling said housing to have a relatively small footprint as compared to said housing height.

83. (Previously Added) The system of claim 82, wherein each said first pin electrode is pointed in a generally horizontal direction toward a corresponding said opening in a corresponding said second ring electrode, to produce an airflow, containing at least one of ions and ozone, in said generally horizontal direction.

84. (Previously Added) The system of claim 25, wherein said second ring electrodes are removable from said upstanding elongated housing to provide cleaning access.

85. (Previously Added) The system of claim 84, further comprising:

a user liftable handle to assist in removal of said second ring electrodes out through a top of said upstanding elongated housing.

86. (Previously Added) The system of claim 25, wherein each said first pin electrode is located closer to said air inlet vent than to said air outlet vent; wherein each said second ring electrode is located closer to said air outlet vent than to said air inlet vent; and whereby a substantial airflow is produced from said inlet vent to said outlet vent without the use of a fan.

87. (Previously Added) The system of claim 62, wherein said elongated housing has a housing height that is at least twice a maximum housing width, and wherein said plurality of openings, surrounded by electrically conductive material, are located one above the other to form a single column within said housing, thereby enabling said housing to have a relatively small footprint as compared to said housing height.

88. (Previously Added) The system of claim 87, wherein each said tapered electrode is pointed in a generally horizontal direction toward a corresponding said opening, to produce an airflow, containing at least one of ions and ozone, in said generally horizontal direction.

89. (Previously Added) The system of claim 62, wherein said electrically conductive material surrounding said openings is removable from said elongated housing.

90. (Previously Added) The system of claim 89, further comprising:

a user liftable handle to assist in removal of said electrically conductive material, surrounding said openings, out through a top of said elongated housing.

91. (Previously Added) The system of claim 62, wherein each said tapered electrode is located closer to said air inlet vent than to said air outlet vent; wherein said electrically conductive material surrounding said openings is located closer to said air outlet vent than to said air inlet vent; and whereby a substantial airflow is produced from said inlet vent to said outlet vent without the use of a fan.

92. (Previously Added) An electro-kinetic air transporter-conditioner system comprising:

a freestanding vertically elongated housing with a top and an air inlet vent and an air outlet vent;

an ion generating unit positioned in said housing, said ion generating unit having a plurality of pin-ring electrode configurations located in a single column one above the other in an elongated manner, each of said pin-ring electrode configurations including a first pin electrode that is directed toward an opening in a second ring electrode; and

a user operated control located on the top of said housing.

93. (New) The system of claim 25, wherein said upstanding, elongated housing further includes lower and upper ends, with a base near said lower end to support said upstanding, elongated housing in an upstanding position when said base is placed on a substantially horizontal surface.

94. (New) The system of claim 44, wherein said upstanding, elongated housing further includes lower and upper ends, with a base near said lower end to support said upstanding, elongated housing in an upstanding position when said base is placed on a substantially horizontal surface.

95. (New) The system of claim 62, wherein said upstanding, elongated housing further includes lower and upper ends, with a base near said lower end to support said upstanding, elongated housing in an upstanding position when said base is placed on a substantially horizontal surface.

96. (New) The system of claim 69, wherein said upstanding, elongated housing further includes lower and upper ends, with a base near said lower end to support said upstanding, elongated housing in an upstanding position when said base is placed on a substantially horizontal surface.

97. (New) The system of claim 77, wherein said upstanding, elongated housing further includes lower and upper ends, with a base near said lower end to support said upstanding, elongated housing in an upstanding position when said base is placed on a substantially horizontal surface.

98. (New) The system of claim 78, wherein said upstanding, elongated housing further includes lower and upper ends, with a base near said lower end to support said upstanding, elongated housing in an upstanding position when said base is placed on a substantially horizontal surface.

99. (New) The system of claim 79, wherein said upstanding, elongated housing further includes lower and upper ends, with a base near said lower end to support said upstanding, elongated housing in an upstanding position when said base is placed on a substantially horizontal surface.

100. (New) The system of claim 92, further including a base near a lower end of said housing, distal from said top of said housing, to support said housing in an upstanding position when said base is placed on a substantially horizontal surface.

101. (New) The system of claim 44 wherein said ring electrode has a skirt region surrounding said opening.

102. (New) An electro-kinetic air transporter-conditioner system comprising:

an upstanding, elongated housing with an air inlet vent located in a first side of said housing and an air outlet vent located in a second side of said housing generally opposite said first side;

said inlet vent and said outlet vent being elongated along a length of said elongated housing;

an ion generating unit positioned in said housing, said ion generating unit having a pin-ring electrode configuration; and

said pin-ring electrode configuration including a pin electrode that is directed in a downstream direction toward an opening in a ring electrode; and

wherein said pin-ring electrode configuration produces an electro kinetic airflow from the air inlet vent to the air outlet vent.